REMARKS

Applicant respectfully requests further examination and reconsideration in view of the instant response. Claims 1-26 remain pending in the case. Claims 1-16 and 18-26 are rejected. Claim 17 is objected.

ALLOWABLE SUBJECT MATTER

Applicant wishes to thank the Examiner for the indication that Claim 17 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

35 U.S.C. §101

The Office Action mailed September 13, 2007, states that Claims 14-16 and 18-26 are rejected under 35 U.S.C. §101 as it is asserted that "the claimed invention is directed to non-statutory subject matter" (instant Office Action; page 2, section 1).

Applicant respectfully requests that the rejection of Claims 14-16 and 18-26 under 35 U.S.C. §101 fails to make a *prima facie* showing that "the claimed invention is directed to non-statutory subject matter."

Applicant respectfully notes that MPEP 2107.02(IV) recites in part (emphasis added):

> "To properly reject a claimed invention under 35 U.S.C. 101, the Office must (A) make a *prima facie* showing that the claimed

> invention lacks utility, and (B) provide a sufficient evidentiary basis for factual assumptions relied upon in establishing the *prima facie* showing. *In re Gaubert*, 524 F.2d 1222, 1224, 187 USPQ 664, 666 (CCPA 1975) ("Accordingly, the PTO must do more than merely question operability - it must set forth factual reasons which would lead one skilled in the art to question the objective truth of the statement of operability.").... The *prima facie* showing must be set forth in a well-reasoned statement. Any rejection based on lack of utility should include a detailed explanation why the claimed invention has no specific and substantial credible utility. Whenever possible, the examiner should provide documentary evidence regardless of publication date (e.g., scientific or technical journals, excerpts from treatises or books, or U.S. or foreign patents) to support the factual basis for the *prima facie* showing of no specific and substantial credible utility. If documentary evidence is not available, the examiner should specifically explain the scientific basis for his or her factual conclusions.

Applicant respectfully requests that the Office Action has not satisfied the requirements outlined above. In particular, Applicant respectfully asserts that the Office Action has not made a *prima facie* showing that the claimed invention lacks utility and has not provided substantial evidentiary basis relied upon in making a *prima facie* showing. Applicant submits that the statements "[n]o physical transformation is present to establish a practical application of the idea. The result (responsiveness) is useful and concrete, but not tangible" and "[n]o physical transformation is present to establish a practical application of the idea. The result (optimal quantization step size) is useful and concrete, but not tangible" (see instant Office Action; page 2, section 1) is not sufficient to support a *prima facie* showing. Moreover, no evidentiary support is provided in the Office Action.

Therefore, Applicant respectfully requests that Claims 14-16 and 18-26 overcome the rejection under 35 U.S.C. §101, as the rejection fails to make a *prima facie* showing that the claimed invention is directed toward non-statutory subject matter. Furthermore, Applicant respectfully requests that no grounds of rejection remain for Claims 24-26 and therefore that Claims 24-26 are allowable.

35 U.S.C. §102(b) – Claims 1-5 and 9-11

The Office Action mailed September 13, 2007, states that Claims 1-5 and 9-11 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,208,688 by Seo et al., hereinafter referred to as "Seo." Applicant has reviewed Seo and respectfully submits that the claimed embodiments as recited in Claims 1-5 and 9-11 are not anticipated by Seo for at least the following rationale.

Applicant respectfully directs the Examiner to independent Claim 1 that recites that an embodiment of the present invention is directed to (emphasis added):

> A method for deblocking and transcoding a media stream, said method comprising:
> receiving a coefficient associated with a block of pixels of said media stream;
> performing a deblocking operation on said coefficient to generate a second coefficient; and
> performing quantization on said second coefficient to generate a transcoded coefficient.

Independent Claim 9 recites includes a similar recitation. Claims 2-5 that depend from independent Claim 1 and Claims 10 and 11 that depend from independent Claim 9 also include these recitations.

MPEP §2131 provides:

> "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). ... "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim.

Applicant respectfully requests that Seo is very different from the claimed embodiments. Applicant understands Seo to teach a method for selecting a requantization step size and controlling a bit-rate for a bitstream (Abstract). In particular, Applicant respectfully requests that Seo does not teach, describe or suggest "performing a deblocking operation on said coefficient to generate a second coefficient" (emphasis added) as claimed.

With reference to Figure 1 of Seo, a block diagram of a transcoder including dequantizer 12 and requantizer 13 is shown (col. 3, lines 18-22). Moreover, with reference to Figures 5 and 6C of Seo, dequantization and requantization algorithms are shown (col. 5, lines 22-28). In particular, Seo

discloses the use of a single dequantization step, shown at Eq. 5, and two requantization steps, shown at Eqs. 6 and 7 (col. 5, lines 29-40).

The instant Office Action appears to assert that Eqs. 5 and 6 illustrate a deblocking operation (see Office Action mailed September 13, 2007; page 3, lines 5-7). Applicant respectfully requests that dequantization and requantization is not equivalent to "deblocking" as claimed. In particular, Applicant submits that Seo does not include any teaching or statement that dequantization and requantization is equivalent to "deblocking." Moreover, Applicant has reviewed Seo and are unable to locate any teaching to "deblocking" or "performing a deblocking operation" as claimed.

As such, Applicant respectfully requests that Seo does not show the identical invention "in as complete detail as is contained in the ... claim" (MPEP §2131) as required to support an anticipation rejection. Therefore, Applicant respectfully requests that Seo does not anticipate "performing a deblocking operation on said coefficient to generate a second coefficient" (emphasis added) as claimed.

Applicant respectfully asserts that Seo does not teach, disclose or suggest the claimed embodiments of the present invention as recited in independent Claims 1 and 9, that these claims overcome the rejection under 35

U.S.C. § 102(b), and that these claims are thus in a condition for allowance. Applicant respectfully requests that Seo also does not teach or suggest the additional claimed features of the present invention as recited in Claims 2-5 that depend from independent Claim 1 and Claims 10 and 11 that depend from independent Claim 9. Therefore, Applicant respectfully requests that Claims 2-5, 10 and 11 also overcome the rejection under 35 U.S.C. § 102(b), and are in a condition for allowance as being dependent on an allowable base claim.

35 U.S.C. §102(b) – Claims 14-16, 18 and 20

The Office Action mailed September 13, 2007, states that Claims 14-16, 18 and 20 are rejected under 35 U.S.C. §102(b) as being anticipated by "Selective Requantization for Transcoding of MPEG Compressed Video" by Sorial et al., hereinafter referred to as "Sorial." Applicant has reviewed Sorial and respectfully submits that the claimed embodiments as recited in Claims 14-16, 18 and 20 are not anticipated by Sorial for at least the following rationale.

Applicant respectfully directs the Examiner to independent Claim 14 that recites that an embodiment of the present invention is directed to (emphasis added):

> A method for determining responsiveness of a coefficient of a media stream, said method comprising:
> receiving a plurality of first coefficients and a plurality of second coefficients associated with plurality of blocks of pixels of said media stream, a first quantization step size, a second quantization step size, and a quantization operation;

performing said quantization operation for a first coefficient of said plurality of first coefficients and a second coefficient of said plurality of second coefficients, said quantization operation based on said first quantization step size and said second quantization step size; and

determining whether said first coefficient is responsive based on said quantization operation.

Claims 15, 16, 18 and 20 that depend from independent Claim 14 also include these recitations.

As presented above, MPEP §2131 provides:

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). ... "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim.

Applicant respectfully requests that Sorial is very different from the claimed embodiments. Applicant understands Sorial to teach selective requantization for transcoding of MPEG compressed video. In particular, Applicant respectfully requests that Sorial does not teach, describe or suggest "receiving a plurality of first coefficients and a plurality of second coefficients associated with plurality of blocks of pixels of said media stream, a first quantization step size, a second quantization step size, and a quantization operation; and determining whether said first coefficient is responsive based on said quantization operation" (emphasis added) as claimed.

With reference to Equation 1 of Sorial, a requantized version of an input DCT coefficient is determined based on the quantized input DCT coefficient and encoder and transcoder quantization coefficients including minimum step sizes (Section 2, paragraph 2). In particular, the requantized version is not received for performing the requantization process, but rather is generated as the output of the requantization process. Accordingly, Applicant respectfully requests that Sorial does not teach, describe or suggest "receiving a plurality of first coefficients and a plurality of second coefficients" (emphasis added) as claimed.

Furthermore, with reference to Figure 4(b), Sorial recites "if the finer quantizer's cell overlap with two cells of a coarser quantizer, then cascading error is introduced by requantization if the reconstructed value after the first quantization and the original data value each fall into a different quantization cell in the coarser quantizer" (emphasis added; Section 3, paragraph 5). In contrast, the claimed embodiment recites "determining whether said first coefficient is responsive based on said quantization operation" (emphasis added) as claimed. Applicant respectfully requests that cascading error introduced by requantization does not teach, describe or suggest "determining whether said first coefficient is responsive based on said quantization operation" (emphasis added).

As such, Applicant respectfully requests that Sorial does not show the identical invention "in as complete detail as is contained in the ... claim" (MPEP

§2131) as required to support an anticipation rejection. Therefore, Applicant respectfully requests that Sorial does not anticipate "receiving a plurality of first coefficients and a plurality of second coefficients associated with plurality of blocks of pixels of said media stream, a first quantization step size, a second quantization step size, and a quantization operation; and determining whether said first coefficient is responsive based on said quantization operation" (emphasis added) as claimed.

Applicant respectfully asserts that Sorial does not teach, disclose or suggest the claimed embodiments of the present invention as recited in independent Claim 14, that this claim overcomes the rejection under 35 U.S.C. § 102(b), and that this claim is thus in a condition for allowance. Applicant respectfully requests that Sorial also does not teach or suggest the additional claimed features of the present invention as recited in Claims 15, 16, 18 and 20 that depend from independent Claim 14. Therefore, Applicant respectfully requests that Claims 15, 16, 18 and 20 also overcome the rejection under 35 U.S.C. § 102(b), and are in a condition for allowance as being dependent on an allowable base claim.

35 U.S.C. §103(a) – Claims 6 and 12

The instant Office Action states that Claims 6 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Seo in view of Sorial, further in view of "Blocking Artifact Reduction in Frequency Domain" by Triantafyllidis et

al., hereinafter referred to as "Triantafyllidis." Applicant has reviewed Seo, Sorial and Triantafyllidis and respectfully submits that the claimed embodiments as recited in Claims 6 and 12 are patentable over the combination of Seo, Sorial and Triantafyllidis for at least the following rationale.

Applicant notes that Claim 6 recites "determining whether said first coefficient is responsive," and that Claim 12 includes a similar embodiment.

First, Seo, Sorial and Triantafyllidis do not teach, describe or suggest "determining whether said first coefficient is responsive" as claimed. Applicant respectfully requests that Seo does not teach, describe or suggest determining responsiveness of a coefficient, and is not relied upon as teaching such.

Furthermore, as presented above, Applicant respectfully requests that Sorial does not teach, describe or suggest "determining whether said first coefficient is responsive." Applicant respectfully requests that cascading error introduced by requantization does not teach, describe or suggest "determining whether said first coefficient is responsive" (emphasis added). In particular, Applicant respectfully requests that the introduction of cascading error does not teach, describe or suggest determining responsiveness.

Moreover, Applicant respectfully requests that Triantafyllidis does not teach, describe or suggest determining responsiveness of a coefficient, and is not relied upon as teaching such. In contrast, Applicant notes that Triantafyllidis discloses blocking artifact reduction in frequency domain.

Second, Applicant respectfully requests that the combination of Seo, Sorial and Triantafyllidis does not establish a *prima facie* case of obviousness. "As reiterated by the Supreme Court in *KSR*, the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Obviousness is a question of law based on underlying factual inquiries" including "[a]scertaining the differences between the claimed invention and the prior art" (MPEP 2141). "In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious" (emphasis in original; MPEP 2141.02(I)). Applicant notes that "[t]he prior art reference (or references when combined) need not teach or suggest all the claim limitations, however, Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art" (emphasis added; MPEP 2141(III)).

In asserting that Sorial discloses "determining whether said first coefficient is responsive" (emphasis added) as claimed, the instant Office Action relies on

the teaching that cascading error is introduced by requantization. Applicant respectfully requests does not teach, describe or suggest "determining whether said first coefficient is responsive" (emphasis added). In particular, Applicant respectfully requests that the introduction of cascading error does not teach, describe or suggest determining responsiveness. Applicant respectfully requests that the instant Office Action does not include the requisite explanation as to why the differences between the prior art and claimed invention, e.g., cascading error versus determining responsiveness, would have been obvious to one of skill in the art. Therefore, Applicant respectfully requests that the combination of Seo, Sorial and Triantafyllidis does not establish a *prima facie* case of obviousness.

Applicant respectfully asserts that the combination of Seo, Sorial and Triantafyllidis does not support a *prima facie* case of obviousness and does not teach, disclose or suggest the claimed embodiments of the present invention as recited in Claims 6 and 12, that these claims overcome the rejection under 35 U.S.C. § 103(a), and that these claims are thus in a condition for allowance.

35 U.S.C. §103(a) – Claims 7 and 13

The instant Office Action states that Claims 7 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Seo in view of Sorial, further in view of Triantafyllidis, yet further in view of U.S. Patent No. 6,987,808 by Mine, hereinafter referred to as "Mine." Applicant has reviewed Seo, Sorial, Triantafyllidis and Mine and respectfully submits that the claimed embodiments

as recited in Claims 7 and 13 are patentable over the combination of Seo, Sorial, Triantafyllidis and Mine for at least the following rationale.

Claim 7 is dependent on Claim 6 and includes the recitations of Claim 6 and Claim 13 is dependent on Claim 12 and includes the recitations of Claim 12. Hence, by demonstrating that Seo, Sorial, Triantafyllidis and Mine do not show or suggest the limitations of Claims 6 and 12, it is also demonstrated that Seo, Sorial, Triantafyllidis and Mine do not show or suggest the embodiments of Claims 7 and 13.

As presented above, Applicant respectfully requests that the combination of Seo, Sorial and Triantafyllidis does not teach, describe or suggest "determining whether said first coefficient is responsive." Furthermore, as presented above, Applicant respectfully requests that the instant Office Action does not include the requisite explanation as to why the differences between Sorial and claimed invention, e.g., cascading error versus determining responsiveness, would have been obvious to one of skill in the art. The Examiner is respectfully directed to the argument accompanying the discussion of the rejection of Claims 6 and 12 above to support this assertion; the argument is not duplicated here for purposes of brevity.

Furthermore, Applicant respectfully requests that Mine does not teach, describe or suggest "determining whether said first coefficient is responsive."

Applicant understands Mine to disclose a transcoding method and transcoding apparatus. Applicant respectfully requests that Mine is silent as to "determining whether said first coefficient is responsive," and moreover is not relied upon as providing such a teaching.

Applicant respectfully asserts that the combination of Seo, Sorial, Triantafyllidis and Mine does not support a *prima facie* case of obviousness and does not teach, disclose or suggest the claimed embodiments of the present invention as recited in Claims 6 and 12, that these claims overcome the rejection under 35 U.S.C. § 103(a), and that these claims are thus in a condition for allowance. Applicant respectfully requests that the combination of Seo, Sorial, Triantafyllidis and Mine also does not teach or suggest the additional claimed features of the present invention as recited in Claims 7 that depend from Claim 6 and Claim 13 that depends from Claim 12. Therefore, Applicant respectfully requests that Claims 7 and 13 also overcome the rejection under 35 U.S.C. § 103(a), and are in a condition for allowance as being dependent on an allowable base claim.

35 U.S.C. §103(a) – Claim 8

The instant Office Action states that Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Seo in view of U.S. Patent No. 6,587,508 by Hanamura et al., hereinafter referred to as "Hanamura." Applicant has reviewed Seo and Hanamura and respectfully submits that the claimed embodiments as

recited in Claim 8 is patentable over the combination of Seo and Hanamura for at least the following rationale.

Claim 8 is dependent on independent Claim 1 and includes the recitations of Claim 1. Hence, by demonstrating that Seo and Hanamura do not show or suggest the limitations of Claim 1, it is also demonstrated that Seo and Hanamura do not show or suggest the embodiments of Claim 8.

As presented above, Applicant respectfully requests that the combination of Seo does not teach, describe or suggest "performing a deblocking operation" as claimed. The Examiner is respectfully directed to the argument accompanying the discussion of the rejection of Claims 1-5 and 9-11 above to support this assertion; the argument is not duplicated here for purposes of brevity.

Furthermore, Applicant respectfully requests that Hanamura does not teach, describe or suggest "performing a deblocking operation." Applicant understands Hanamura to disclose an apparatus for transcoding a coded moving picture sequence. Applicant respectfully requests that Hanamura is silent as to "performing a deblocking operation," and moreover is not relied upon as providing such a teaching.

Applicant respectfully asserts that the combination of Seo and Hanamura does not support a *prima facie* case of obviousness and does not teach, disclose or suggest the claimed embodiments of the present invention as recited in Claim 1, that this claim overcomes the rejection under 35 U.S.C. § 103(a), and that this claim is thus in a condition for allowance. Applicant respectfully requests that the combination of Seo and Hanamura also does not teach or suggest the additional claimed features of the present invention as recited in Claim 8 that depends from independent Claim 1. Therefore, Applicant respectfully requests that Claim 8 also overcome the rejection under 35 U.S.C. § 103(a), and is in a condition for allowance as being dependent on an allowable base claim.

35 U.S.C. §103(a) – Claims 19 and 21-23

The instant Office Action states that Claims 19 and 21-23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sorial in view of Mine. Applicant has reviewed Sorial and Mine and respectfully submits that the claimed embodiments as recited in Claims 19 and 21-23 are patentable over the combination of Sorial and Mine for at least the following rationale.

Claim 19 is dependent on independent Claim 14 and includes the recitations of Claim 14. Hence, by demonstrating that Sorial and Mine do not show or suggest the limitations of Claim 14, it is also demonstrated that Sorial and Mine do not show or suggest the embodiments of Claim 19.

Applicant notes that Claim 14 recites "determining whether said first coefficient is responsive," and that Claim 21 includes a similar embodiment.

As presented above, Applicant respectfully requests that Sorial does not teach, describe or suggest "determining whether said first coefficient is responsive." Furthermore, as presented above, Applicant respectfully requests that the instant Office Action does not include the requisite explanation as to why the differences between Sorial and claimed invention, e.g., cascading error versus determining responsiveness, would have been obvious to one of skill in the art. The Examiner is respectfully directed to the argument accompanying the discussion of the rejection of Claims 14-16, 18 and 20 and the argument accompanying the discussion of the rejection of Claims 6 and 12 above to support this assertion; the arguments are not duplicated here for purposes of brevity.

Furthermore, Applicant respectfully requests that Mine does not teach, describe or suggest "determining whether said first coefficient is responsive." Applicant understands Mine to disclose a transcoding method and transcoding apparatus. Applicant respectfully requests that Mine is silent as to "determining whether said first coefficient is responsive," and moreover is not relied upon as providing such a teaching.

Applicant respectfully asserts that the combination of Sorial and Mine does not support a *prima facie* case of obviousness and does not teach, disclose or suggest the claimed embodiments of the present invention as recited in independent Claims 14 and 21, that these claims overcome the rejection under 35 U.S.C. § 103(a), and that these claims are thus in a condition for allowance. Applicant respectfully requests that the combination of Seo and Mine also does not teach or suggest the additional claimed features of the present invention as recited in Claims 19 that depend from independent Claim 14 and Claims 22 and 23 that depend from independent Claim 21. Therefore, Applicant respectfully requests that Claims 19, 22 and 23 also overcome the rejection under 35 U.S.C. § 103(a), and are in a condition for allowance as being dependent on an allowable base claim.

CONCLUSION

Based on the arguments presented above, Applicant respectfully asserts that Claims 1-16 and 18-26 overcome the rejections of record and, therefore, Applicant respectfully solicits allowance of these Claims.

Respectfully submitted,

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